

me show evident Brunner's organs, regardless of habitat or systematic unit represented. The above listed habitat assignments are largely made from personal field acquaintance with the genera mentioned, often from scores of observations.

It is thus clearly evident to me that the presence or absence of Brunner's organ is not controlled by either the general form or habitat of given genera, and that it is absent or suppressed in certain primitive families and in the very aberrant *Psednura*, but is present in the great bulk of the Acridoidea. There is no correlation with alar development, as they are present in apterous and in alate genera occurring in approximately or exactly similar habitats.

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### Three Cave-Dwelling Millipeds

By RALPH V. CHAMBERLIN

The present paper deals with three species of millipeds occurring in caves in Texas and New Mexico where the specimens examined were collected by O. G. Babcock and Dr. F. C. Bishopp. Of the three species, one was previously known, while the other two represent new genera as diagnosed below. The types are for the present retained in the author's collection at the University of Utah.

#### Genus **ECLYTUS**, new

A genus of Cambalidae belonging in the group that lack eyes. The body is constricted into a distinct neck back of the head as in *Odochurus* and *Pharodere*. Collum with lower part of anterior border free, with antenna on each side folded beneath it, like *Odochurus* and differing from *Pharodere* in lacking lateral striations. Metazonites with series of longitudinal striae. Metatergites elevated, crossed over entire length by a series of keels or carinae of which there are six, these including a paramedian pair between each of which and the poriferous keel is a single well developed keel, there being no true secondary or reduced carinae. None of the carinae projecting beyond caudal

margin on any of the segments. Carinae present on penult tergite. Segments typically near forty in number.

Generotype: *Eclytus speobius* sp. n.

***Eclytus speobius* sp. n.**

Color of preserved specimens yellow to pale brown.

Antennae with second joint clearly longest, the sixth next in length.

Collum large, longer than the three following tergites taken together.

Anterior margin below forming an even curve with the lateral margin, the caudal corner sub-rectangular; surface of collum smooth.

Second segment striate below, the dorsal keels present but reduced in height. On the succeeding tergites the keels are sharply elevated and complete; segments strongly striate below. Keels well developed on the penult tergite.

Last tergite longer than the two preceding taken together, but shorter than three; caudally rounded and exceeded by the anal valves. Anal valves inflated, meeting in a groove at the middle. Anal scale transverse, the long caudal margin slightly obtusely notched at the middle and weakly convex on each side.

Number of segments, 41-43.

Diameter, up to 1.8 mm.

Localities: TEXAS: Sutton Co., Sonora. Many specimens taken deep in Wyatt cave, mostly noted as in complete darkness, in September and October, 1924, and June and July, 1926 (F. C. Bishopp and O. G. Babcock); several also taken in Felton Cave on July 19, 1928 by Babcock.

Genus **SPEORTHUS**, new

A genus of Polydesmidae related closely to *Spcodesmus* which it resembles in lacking series of elevated areas or tubercles on the tergites. It differs from that genus in having the dorsal setae more irregularly arranged, these tending to form five series instead of three. It differs also in lacking the aberrant, caudally

broad and strongly setose anal scale of the other genus, this scale in the present genus being of the more usual form.

Generotype: *Speorthus tuganbius* sp. n.

***Speorthus tuganbius* sp. n.**

Pale or colorless throughout.

Head above and down the front clothed with short setae which are densest on lower part of face and sparse above. Antennae distally clavate; the third joint longest; sixth joint thick and of nearly uniform diameter distad of the constricted base and with a patch of sensory cones on upper side at distal end as in *Spcodesmus*.

Collum with margin laterally rounded, convex anteriorly and slightly convex or nearly straight caudally.

Other tergites without distinct transverse sulcus. Anterior tergites with setae in three series, the others with setae in approximately five series; setae arising from short slight keels or laterally compressed granules. Lateral keels with four setiferous serrations or teeth in front of that at caudal corner.

Anal tergite projecting well beyond the anal valves, the cauda not deflexed.

Anal scale caudally truncate, the short caudal margin with a tubercle at each end bearing a long seta, the margin between tubercles slightly obtuse at middle; sides diverging forward and flaring out more strongly at anterior end.

Length: 8 mm.

Locality: NEW MEXICO: Carlsbad Caverns. Several females were taken April 24, 1924, about fifty yards from west entrance, the location being "almost dark except for subdued light in the afternoon." O. G. Babcock, collector.

***Speobius echinourus* Loomis**

Locality: TEXAS: San Marcos County. Two females, now badly fragmented and apparently this species were taken on July 26, 1932, in Wonder Cave about 75 feet from the entrance. F. C. Bishopp, collector.

The original types of this species were described from caves in the adjoining Kerr County.